IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A method for managing a service across an optical network over a dedicated circuit between a first and second service termination points, the method comprising:

generating a service performance report message at each of the service termination points, each service performance report message having service-specific information related to a performance of the service as determined by the service termination point generating that service performance report message, and each service performance report message identifying the service to which the service-specific information in that service performance report message pertains; and

transmitting the service performance report message generated by one of the service termination points to the other service termination point over a service management channel to enable an assessment of the performance of the service based on the service performance report messages from both service termination points.

2. (Original) The method of claim 1, further comprising monitoring the service management channel from an intermediate network element that is in the dedicated circuit between the service termination points to determine a status of the service.

3. (Original) The method of claim 1, further comprising determining from the performance assessment whether the service is performing in accordance with terms of a service level agreement governing the service.

4. (Original) The method of claim 1, wherein the step of generating a PRM is a scheduled event.

5. (Original) The method of claim 1, further comprising monitoring the PRMs generated by the termination points at an intermediate network element connected to the dedicated circuit between the termination points.

6. (Previously Presented) The method of claim 1, further comprising transmitting a service query command to each of the service termination points over the service management channel.

7. (Previously Presented) The method of claim 6, further comprising receiving a service report having service configuration information over the service management channel from each of the service termination points in response to the service query commands.

8. (Original) The method of claim 1, further comprising transmitting a command message over the service management channel to one of the service termination points to change a state of that service termination point.

9. (Original) The method of claim 8, wherein the state of the service termination point is a loopback condition, and further comprising transmitting a test signal to that one service termination point to verify connectivity.

10. (Previously Presented) An optical network for supporting a service provided by a service provider over a dedicated circuit between service termination points, the optical network comprising first and second network elements each disposed in the dedicated circuit of the service, the first network element sending a message to the second network element over an optical transport facility using a service management channel capable of carrying the message across a network-to-network interface, the message conveying service-specific information related to a performance of the service over the dedicated circuit and identifying the service to which the service-specific information in the message pertains.

11. (Original) The optical network of claim 10, wherein the service management channel includes a byte of a path overhead of an optical transmission frame.

12. (Original) The optical network of claim 10, wherein the service management channel includes a field in a Generic Framing Procedure client management frame.

13. (Original) The optical network of claim 10, wherein the message is one of a command message, a response to a command message, a service performance report message, and a priority code message.

14. (Original) The optical network of claim 10, wherein the first and second network elements are edge service switches.

15. (Original) The optical network of claim 10, wherein one of the first and second network elements is a core service switch.

16. (Original) The optical network of claim 10, wherein the service is one of an asynchronous service, a synchronous service, a local area network service, a storage area network service, and a managed wavelength service.

17. (Previously Presented) The optical network of claim 10, wherein the first network element is in a first network managed by a first service provider and the second network element is in a second network managed by a second service provider.

18. (Original) The optical network of claim 10, wherein the first and second network elements are in a network managed by the service provider.

19. (Previously Presented) A network element connected at one end of a dedicated circuit used to carry customer traffic associated with a service, the network element comprising:

a client interface receiving client signals from a client network;

a service management channel entity deriving from the client signals service-specific information related to a performance of the service and generating a message in response to the service performance information, the message identifying the service to which the service performance information in the message pertains; and

a transport interface for mapping and adapting the client signals to an optical transport facility, the transport interface transmitting the message to a network element at the other end of the dedicated service over a service management channel capable of carrying the message across a network-to-network interface.

20. (Previously Presented) A network element connected between service termination points located at opposite ends of a dedicated circuit used to carry customer traffic associated with a service over a transport facility, the network element comprising:

a transport interface receiving customer traffic associated with the service; and

a service management channel entity processing the customer traffic received by the transport interface to access a message stored in a service management channel of the transport facility by one of the service termination points, the message containing service-specific performance information and identifying the service to which the service-specific performance information pertains.